Claims:

1. A method for identification of effector sequences that effect a cellular phenotype comprising:

- obtaining at least two sets of defined nucleic acid sequences wherein each set comprises at least 100 effector nucleic acid sequences, and wherein one set of the nucleic acid sequences is arrayed on a microarray;
- cloning another set of nucleic acid sequences into a viral expression vector to produce effector constructs;
- packaging the effector constructs into viral particles to produce a viral effector library;
- transducing target cells with the viral effector library;
- assaying the target cells for a phenotype of interest;
- selecting one or more target cells with the phenotype of interest;
- isolating effector nucleic acids from the target cells with the phenotype of interest;
- identifying one or more effector sequences present in the target cells with the phenotype of interest by hybridization of the isolated effector nucleic acids to the microarray.

2. The method of claim 1, wherein at least one set of nucleic acid sequences is synthesized on a solid support.

3. The method of claim 2, wherein the solid support is a microarray.

4. The method of claim 1 wherein each at least two substantially identical sets comprise at least 1000 effector nucleic acid sequences.

5. The method of claim 4 wherein the at least two substantially identical sets comprise at least 10,000 effector nucleic acid sequences.

6. The method of claim 5 wherein the at least two substantially identical sets comprise at least 35,000 effector nucleic acid sequences.

7. The method of claim 1, wherein the effector nucleic acids code for siRNAs.

8. The method of claim 1, wherein the effector nucleic acids code for proteins.

9. The method of claim 1, wherein isolating comprises amplifying of the effector nucleic acid sequences.

10. The method of claim 1, wherein the viral expression vector is a retroviral expression vector.

11. The method of claim 10, wherein the retroviral expression vector is a lentiviral expression vector.

12. The method of claim 11, wherein the lentiviral expression vector is a feline immunodeficiency virus vector.

13. The method of claim 1, wherein the identifying step further comprises;

-determining a first intensity of a hybridization signals of effector nucleic acids isolated from the target cells before the transducing step;

-determining a second intensity of a hybridization signal of effector nucleic acids isolated from target cells after the transducing step;

-comparing the first hybridization instensities to the second hybridization intensities; and

-identifying effector sequences with where there is a difference between the first and the second hybridization intensities.

14. The method of claim 13, further comprising treating the target cells with a stimulus after the transducing step.

15. The method of claim 1, wherein the selecting step is accomplished by growth of the transduced target cells in selective media, sorting by FACS, or by binding of an agent specific to phenotype of interest.

16. The method of claim 1, wherein the target cells are reporter cells transduced with a reporter vector.

17. A viral effector library packaged in viral particles consisting essentially of:

-viral vectors;

-at least 100 effector nucleic acid sequences of known sequence inserted into the viral vectors, wherein the at least 100 effector nucleic acid sequences of known sequence are of mammalian origin and correspond to probes on a nucleic acid microarray; and

-one or more eukaryotic promoters operably linked to the effector nucleic acid sequences of known sequence.

18. The viral effector library of claim 17, wherein there are at least 1000 heterogenous nucleic acid sequences inserted into the viral vectors.

19. The viral effector library of claim 18, wherein there are at least 10,000 heterogenous nucleic acid sequences inserted into the viral vectors.

20. The viral effector library of claim 19, wherein there are at least 35,000 heterogenous nucleic acid sequences inserted into the viral vectors.

21. The viral effector library of claim 17, wherein the viral vector is a retroviral vector.

22. The viral effector library of claim 21, wherein the retroviral vector is a lentiviral vector.

23. The viral effector library of claim 17, wherein the effector nucleic acid sequences code for cDNAs, siRNAs, peptides or protein domains.